CLAIMS

What is claimed is:

1. An apparatus comprising:

a base having a first opening of a dimension suitable to pass a light emission therethrough;

a first side wall coupled to the base and having a second opening of a dimension suitable to pass a light emission therethrough;

a second side wall coupled to the base and having a reflective component thereon, and the base, the first side wall, and the second side wall define an interior chamber with the reflective component disposed in the interior chamber; and

a fiber connector extending from an exterior of the first side wall adjacent the second opening.

2. The apparatus of claim 1, further comprising a converging lens disposed about the first opening and defining a principal focus at the reflective component.

3. The apparatus of claim 2, wherein the converging lens comprises a first converging lens, the apparatus further comprising a converging lens disposed about the second opening and the reflective component is disposed at a principal focus of each of the first lens and the second lens.

4. The apparatus of claim 1, wherein the second side wall is coupled to the first side wall and the base such that the apparatus comprises a polygon body of trigonal and tetrahedral facets.

5. The apparatus of claim 1, wherein the fiber connector is adapted to accept an LC connector.

6. The apparatus of claim 1, wherein the first opening and the second opening are aligned through the reflective component to receive a light emission and the base has a third opening and the first side wall has a fourth opening, and the third and fourth opening are aligned to receive a light transmission.

7. A system comprising:

an optical circuit substrate;

at least one of a light receiving source and a light emitting source coupled to the optical circuit substrate;

an optical subassembly coupled to the optical circuit substrates and comprising an input, an output, and a reflective component, the input and reflective component disposed in a path of the at least one of the light receiving source and the light emitting source; and

a fiber optic connector alignment guide coupled to the output of the optical subassembly.

8. The system of claim 7, wherein the fiber optic alignment guide is adapted to be mated to an LC connector.

9. The system of claim 7, further comprising a converging lens disposed about the input of the optical subassembly and defining a principal focus at the reflective component.

10. The system of claim 9, wherein the converging lens comprises a first converging lens, the optical

subassembly further comprising a converging lens disposed about the output and the reflective component is disposed at a principal focus of each of the first lens and the second lens.

11. The system of claim 7, wherein the optical subassembly comprises a base having the input, a first side wall having the output, and a second side wall comprising the reflective component coupled to the first side wall and the base such that the optical subassembly comprises a polygon body of triangular and tetrahedral facets.

12. The system of claim 7, wherein the optical circuit substrate is a transceiver substrate.

13. The system of claim 7, wherein the light emitting source comprises a vertical cavity surface emitting laser (VCSEL) substrate and disposed to emit light in a perpendicular direction relative to a top surface of the VCSEL substrate.

14. A method comprising:

powering a laser disposed in a substrate coupled to a transceiver board;

coupling a fiber optic cable to an optical subassembly; and

aligning the optical assembly over the transceiver board to capture the emitted light from the laser in the fiber optic cable.

15. The method of claim 14, wherein aligning the optical subassembly comprises aligning the fiber optic

cable at a position perpendicular to the path of emitted light.

16. The method of claim 14, wherein, after aligning the optical assembly, coupling the optical assembly to the transceiver board.

17. The method of claim 14, wherein aligning comprises aligning to capture the emitted light within one-half micron of the optical center of the emitted light.

18. The method of claim 15, wherein the laser comprises a vertical cavity surface emitting laser (VCSEL) emitting light in a direction perpendicular to a top surface of the substrate.

subassembly further comprising a converging lens disposed about the output and the reflective component is disposed at a principal focus of each of the first lens and the second lens.

11. The system of claim 7, wherein the optical subassembly comprises a base having the input, a first side wall having the output, and a second side wall comprising the reflective component coupled to the first side wall and the base such that the optical subassembly comprises a polygon body of triangular and tetrahedral facets.

12. The system of claim 7, wherein the optical circuit substrate is a transceiver substrate.

13. The system of claim 7, wherein the light emitting source comprises a vertical cavity surface emitting laser (VCSEL) substrate disposed to emit light in a perpendicular direction relative to a top surface of the VCSEL substrate.

14. A method comprising:

powering a laser disposed in a substrate coupled to a transceiver board;

coupling a fiber optic cable to an optical subassembly; and

aligning the optical assembly over the transceiver board to capture the emitted light from the laser in the fiber optic cable.

15. The method of claim 14, wherein aligning the optical subassembly comprises aligning the fiber optic

cable at a position perpendicular to the path of emitted light.

16. The method of claim 14, wherein, after aligning the optical assembly, coupling the optical assembly to the transceiver board.

17. The method of claim 14, wherein aligning comprises aligning to capture the emitted light within one-half micron of the optical center of the emitted light.

18. The method of claim 15, wherein the laser comprises a vertical cavity surface emitting laser (VCSEL) emitting light in a direction perpendicular to a top surface of the substrate.